DOT MATRIX PRINTER

SP312F

SP342F-A

INSTALLATION MANUAL
GUIDE D'INSTALLATION
AUFSTELLANLEITUNG
MANUALE DI INSTALLAZIONE

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1. UNPACKING AND INSTALLATION

ENGLISH

1-1. Unpacking

After unpacking the unit, check that all the necessary accessories are included in the package.

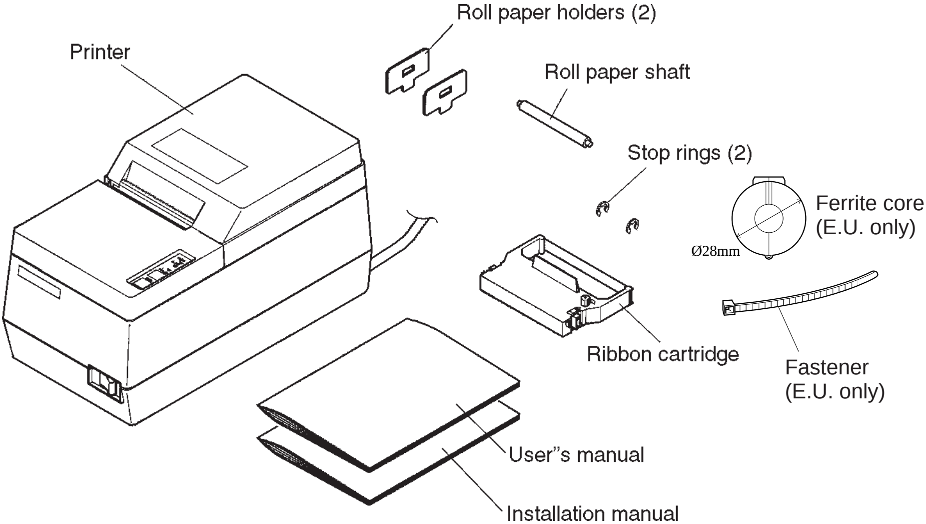


Fig. 1-1 Unpacking (SP312)

1-2. Handling Notes

1. Install the unit on a stand or table which has a flat, even surface.
2. Do not connect the AC power plug to the same outlet used for other electrical noise generating devices (such as an electrical motor, etc.)
   IMPORTANT!
   Install the printer near an easily accessible socket-outlet.
3. Be careful not to drop paper clips, pins or other foreign objects into the unit as these could cause the printer to malfunction.
4. When cleaning the outer surface of the unit, wipe away dirt, foreign matter, etc., with a soft cloth, soaked in a neutral detergent.
5. Do not attempt to print when the paper or ribbon cartridge are not loaded in the printer as this could damage the print head.
6. Use only roll paper that is not glued to the core.
7. Do not open the front cover while printing (this is interpreted as a mechanical error and the printer will stop).

2. PARTS IDENTIFICATION AND NOMENCLATURE

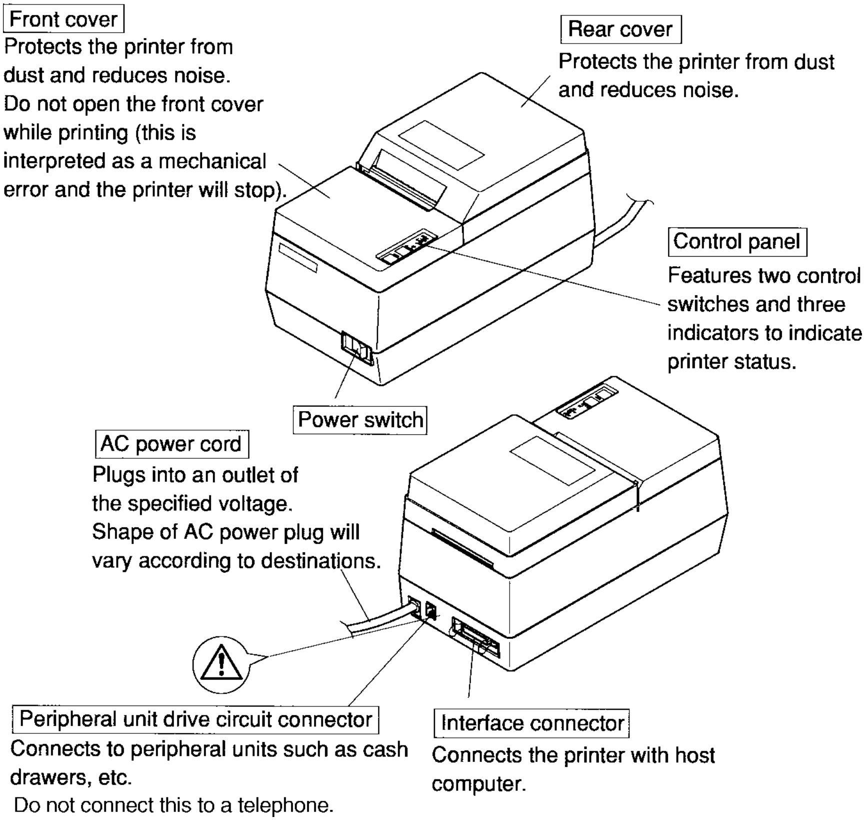


Fig. 2-1 External view of the printer (SP312)

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3. FERRITE CORE INSTALLATION

NOTE: Take special care when following the procedures listed below.

- A ferrite core noise filter for the cash drawer drive cable comes packed with the printer.
- The ferrite core is normally packed so it is opened, as shown in Fig. 3-2. If you find that the ferrite core is not opened: Use a pointed object to pry the plastic lock of the ferrite core apart, as shown in Fig. 3-1. When opening it, take care not to damage the ferrite core or the plastic lock.

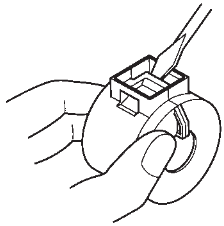
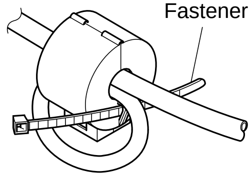


Fig. 3-1



• Pass the fastener through the ferrite core

Fig. 3-3

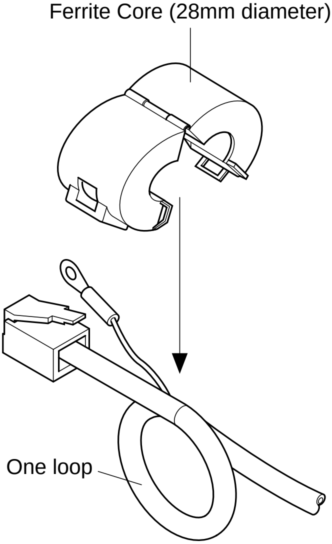
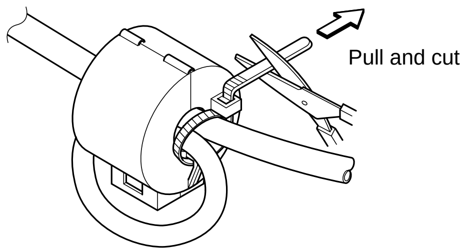


Fig. 3-2



• Pass the fastener around the cable and lock it.

Cut off the excess with a pair of scissors.

Fig. 3-4

■ Clamp the ferrite core onto the cash drawer drive cable, looping the cable as shown in Fig. 3-2.

- When installing the ferrite core be careful not to damage the cable.
- The ferrite core should be anchored firmly in place with the fastener that comes with it, as shown in Fig. 3-3 and Fig. 3-4.
- Do not forget to loop the cable.

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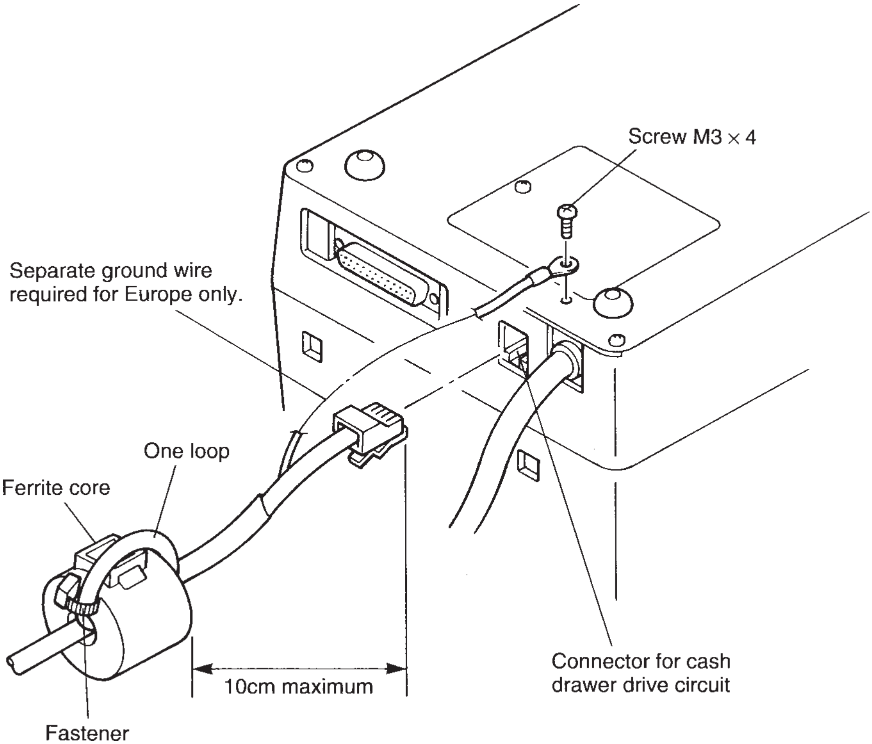


Fig. 3-5

4. CONNECTING THE INTERFACE CABLE

4-1. Serial Interface Cable

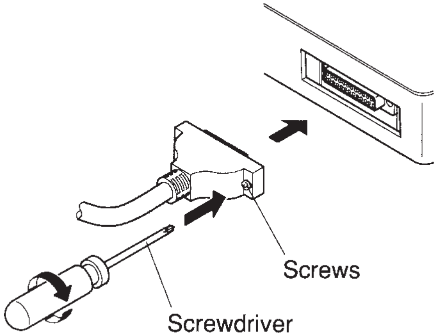


Fig. 4-1 Connecting the serial interface cable

① Turn off power for both the host computer and the printer.
② Insert the connector of the interface cable into the connector on the printer and the other end of the interface cable into the connector for the host computer.
③ Next, tighten the screws on the connectors.

4-2. Parallel Interface Cable

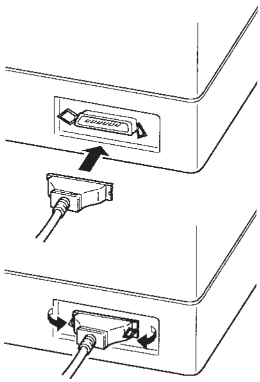


Fig. 4-2 Connecting the parallel interface cable

① Turn off the power for both the host computer and the printer.
② Insert one connector of the interface cable into the printer's connector and fasten it with the clasp, as shown in Fig. 4-2.
③ Insert the other terminal of the interface cable into the host computer's connector, and fasten it with the clasp.

TABLE DES MATIÈRES

L’appendice n’est pas traduit.

1. DÉBALLAGE ET INSTALLATION

1-1. Déballage

Après avoir déballé l'appareil, vérifiez si vous disposez bien de tous les accessoires illustrés ci-après.

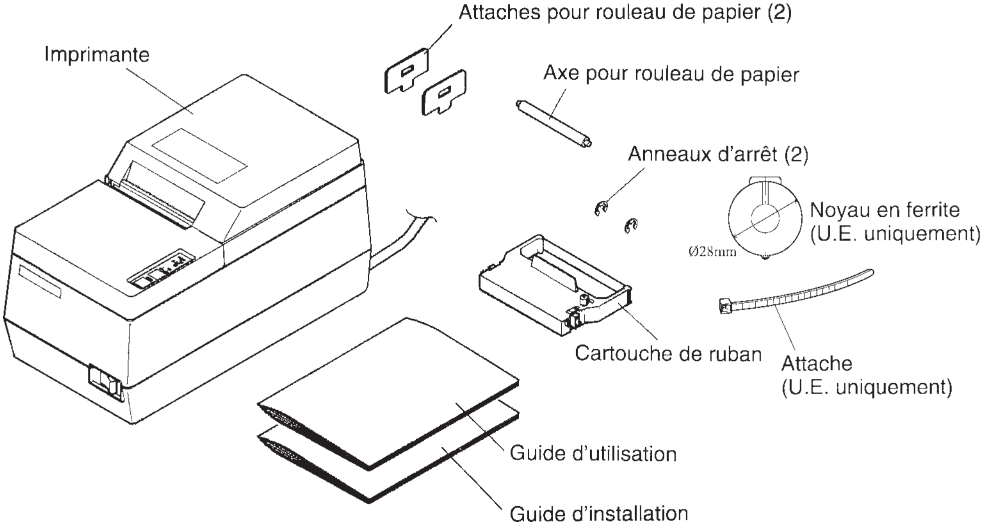


Fig. 1-1 Déballage (SP312)

1-2. Remarques concernant la manipulation

1. Installez l'appareil sur un support ou sur une table dont la surface est plate et uniforme.
2. Ne branchez pas l'appareil à la même prise secteur que d'autres appareils produisant des bruits électriques (appareils ayant un moteur électrique, etc.).
   IMPORTANT !
   Installez l'imprimante le plus près possible d'une prise secteur facilement accessible.
3. Veillez à ne pas laisser tomber des trombones, punaises ou autres objets dans l'appareil, cela risque de causer un mauvais fonctionnement.
4. Nettoyez la surface de l'imprimante à l'aide d'un chiffon doux humidifié et d'un détergent neutre.
5. Ne lancez pas l'impression si le papier ou la cartouche de ruban ne sont pas installés, sous peine d'endommager la tête d'impression.
6. N'utilisez jamais un rouleau de papier dont l'extrémité est collée au rouleau central.
7. N'ouvrez pas le cache avant de l'appareil pendant l'impression ; en effet cela serait interprété comme étant une erreur mécanique et l'impression s'interromprait automatiquement.

2. IDENTIFICATION DES PIÈCES ET NOMENCLATURE

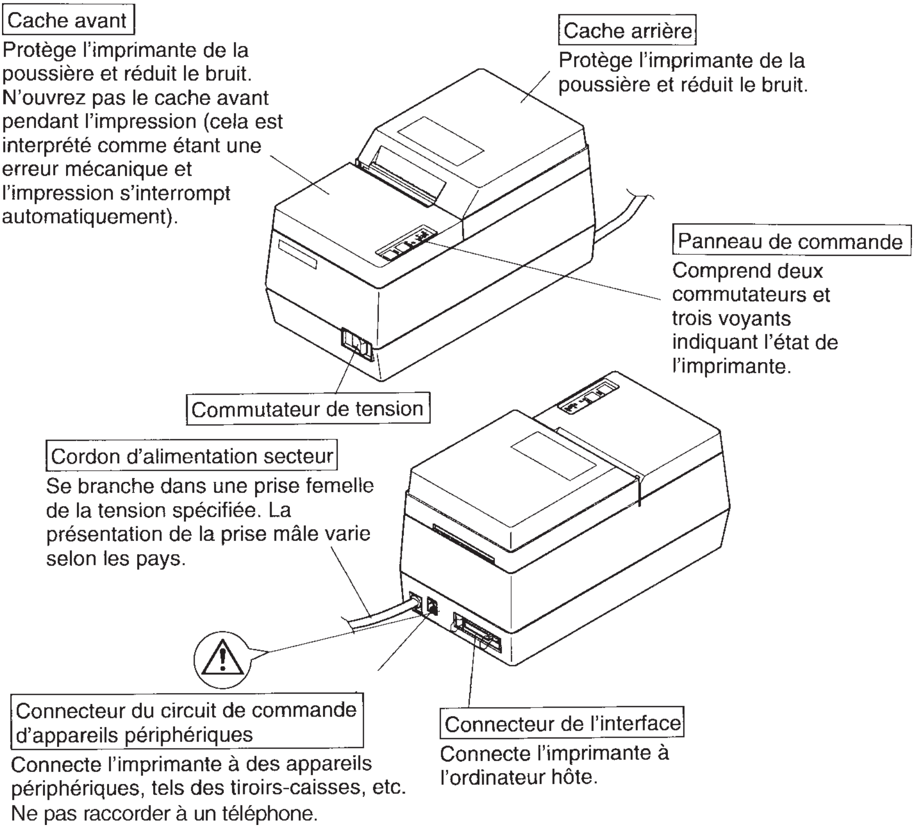


Fig. 2-1 Vue externe de l'imprimante (SP312)

3. INSTALLATION DU NOYAU EN FERRITE

N.B.: Effectuez cette installation avec beaucoup de soin.

- Un filtre antibruit en noyau en ferrite destiné au câble de commande d'un tiroir-caisse est livré avec l'imprimante.
- Le noyau en ferrite devrait normalement être ouvert, comme illustré à la figure 3-2. Si votre noyau en ferrite n'est pas ouvert, il convient de l'ouvrir en faisant levier à l'aide d'un objet pointu, ainsi qu'illustré à la figure 3-1. En l'ouvrant, veillez bien à ne pas endommager ni le noyau en ferrite ni le verrouillage en plastique.

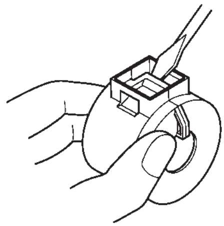
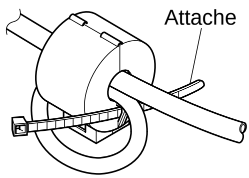


Fig. 3-1



• Faire passer l'attache par le guide du noyau en ferrite.

Fig. 3-3

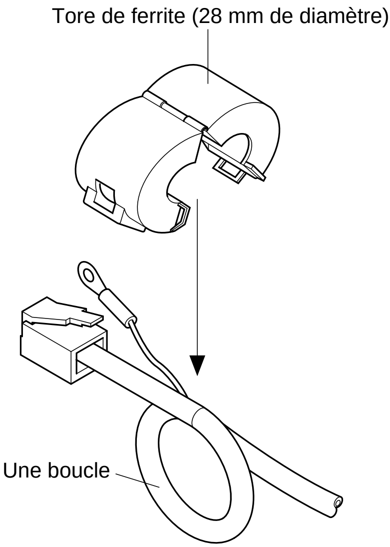
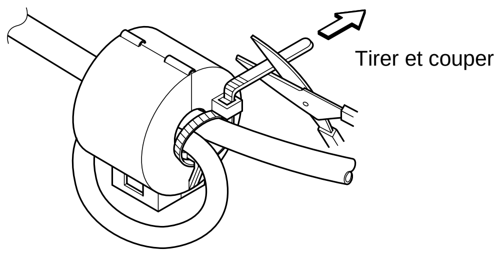


Fig. 3-2



• Faire passer l'attache autour de la boucle du câble et verrouiller.

Coupez le bout de plastique qui dépasse à l'aide d'une paire de ciseaux.

Fig. 3-4

■ Brider le noyau en ferrite au câble de commande du tiroir-caisse après avoir fait une boucle avec le câble, comme illustré à la figure 3-2.

- En montant le noyau en ferrite, veillez à ne pas endommager le câble.
- Le noyau en ferrite doit être maintenu fermement en place à l'aide de l'attache livrée, comme illustré aux figures 3-3 et 3-4.
- Ne pas oublier de former une boucle avec le câble.

FRANÇAIS

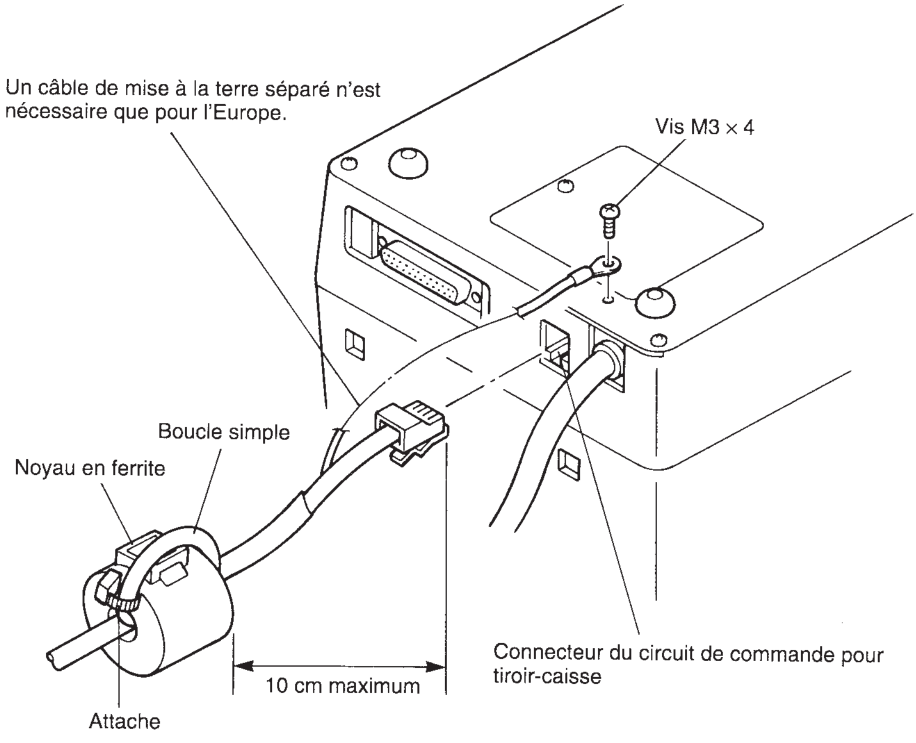


Fig. 3-5

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4. CONNEXION DU CÂBLE D'INTERFACE

4-1. Câble d'interface sériel

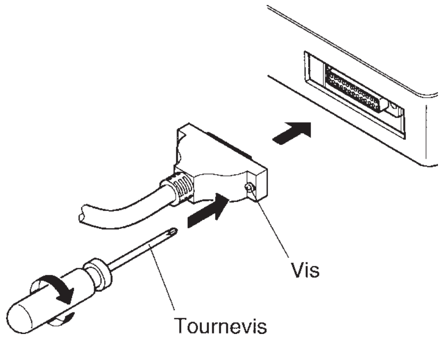


Fig. 4-1 Connexion du câble d'interface en série

① Mettez l'ordinateur hôte et l'imprimante hors tension.
② Insérez un des connecteurs du câble d'interface dans la prise de l'imprimante et l'autre dans la prise de l'ordinateur hôte.
③ Serrez ensuite les vis des connecteurs.

4-2. Câble d'interface parallèle

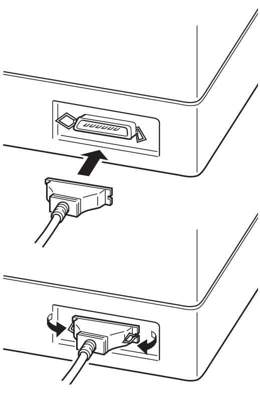


Fig. 4-2 Connexion du câble d'interface en parallèle

① Mettez l'ordinateur hôte et l'imprimante hors tension.
② Insérez un des connecteurs du câble d'interface dans la prise de l'imprimante et fixez-le grâce aux fermoirs, comme illustré à la fig. 4-2.
③ Insérez l'autre connecteur du câble d'interface dans la prise de l'ordinateur hôte, puis fixez-le également à l'aide des fermoirs.

INHALTSVERZEICHNIS

Der Anhang erscheint nur im englischen Teil dieser Bedienungsanleitung

1. AUSPACKEN UND AUFSTELLUNG

DEUTSCH

1-1. Auspacken

Überprüfen Sie den Kartoninhalt, und vergewissern Sie sich, daß alle unten abgebildeten Teile vorhanden sind.

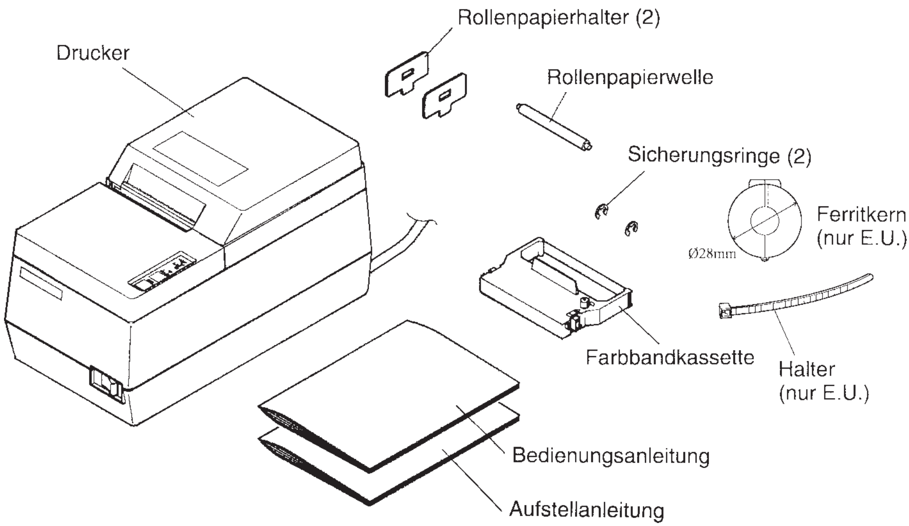


Abb. 1-1 Auspacken (SP312)

1-2. Hinweise zum Umgang

1. Stellen Sie den Drucker auf einem flachen, aber festen Untergrund auf.
2. Schließen Sie keine anderen elektrischen Geräte, die elektrische Störungen erzeugen (wie z.B. Elektromotoren) an die gleiche Steckdose an.
   WICHTIG!
   Die verwendete Steckdose soll in der Nähe und frei zugänglich sein.
3. Achten Sie darauf, keine Papierclips oder anderen Fremdkörper in den Drucker fallen zu lassen. Diese können Betriebsstörungen oder Schäden am Gerät hervorrufen.
4. Bei der Reinigung des Geräteäußeren wischen Sie Flecken oder Schmutz mit einem weichen, mit neutralem Reinigungsmittel angefeuchteten Lappen ab.
5. Versuchen Sie nicht zu drucken, wenn kein Papier oder keine Farbbandkassette eingelegt ist, da sonst der Druckkopf beschädigt werden kann.
6. Verwenden Sie nur Rollenpapier, das nicht am Rollenkern festgeklebt ist.
7. Öffnen Sie nicht die Frontabdeckung während des Druckens (dies wird als mechanische Störung beurteilt, und der Drucker stoppt).

2. BESCHREIBUNG UND BEZEICHNUNG DER GERÄTETEILE

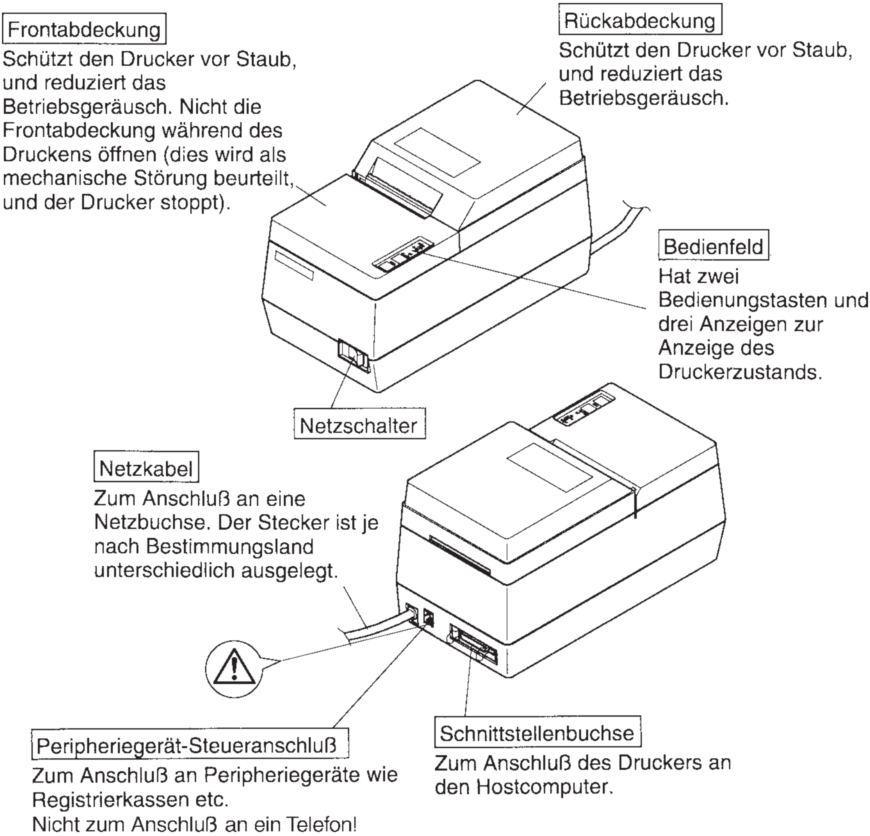


Abb. 2-1 Außenansicht des Druckers (SP312)

DEUTSCH

3. INSTALLATION DES FERRITKERNS

HINWEIS: Führen Sie die folgenden Arbeiten besonders sorgfältig aus.

- Ein Ferritkern-Rauschfilter für das Kassenschubladen-Treiberkabel wird mit dem Drucker mitgeliefert.
- Der Ferritkern ist normalerweise so verpackt, daß er offen ist, wie in der Abbildung 3-2 gezeigt. Wenn Sie feststellen, daß der Ferritkern nicht geöffnet ist: Hebeln Sie die Plastiksperre des Ferritkerns auf, wie in der Abbildung 3-1 gezeigt. Beim Öffnen achten Sie darauf, nicht den Ferritkern oder die Plastiksperre zu beschädigen.

DEUTSCH

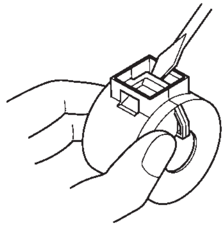
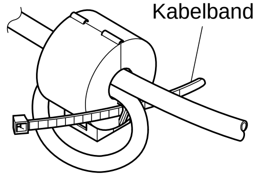


Abb. 3-1



- Das Plastikhalterungsband durch den Ferritkern führen.

Abb. 3-3

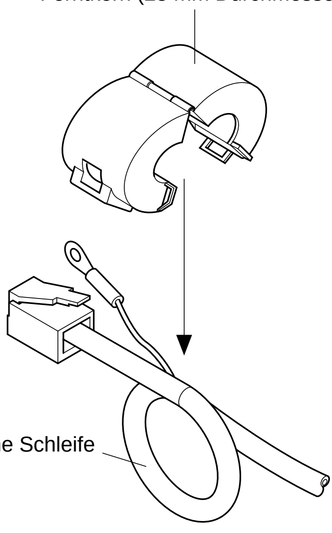
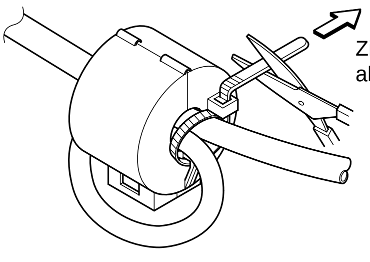


Abb. 3-2



- Das Plastikhalterungsband um das Kabel führen und festziehen.

Überstehendes Band mit einer Schere abschneiden.

Abb. 3-4

■ Den Ferritkern auf das Kassentreiberkabel klemmen, und das Kabel so mit einer Schleife befestigen, wie in der Abbildung 3-2 gezeigt.

- Beim Installieren des Ferritkerns darauf achten, das Kabel nicht zu beschädigen.
- Der Ferritkern soll fest mit dem mitgelieferten Plastikhalterungsband befestigt werden, wie in der Abbildung gezeigt 3-3 und 3-4 gezeigt.
- Nicht vergessen, das Kabel mit Schleife zu verlegen.

DEUTSCH

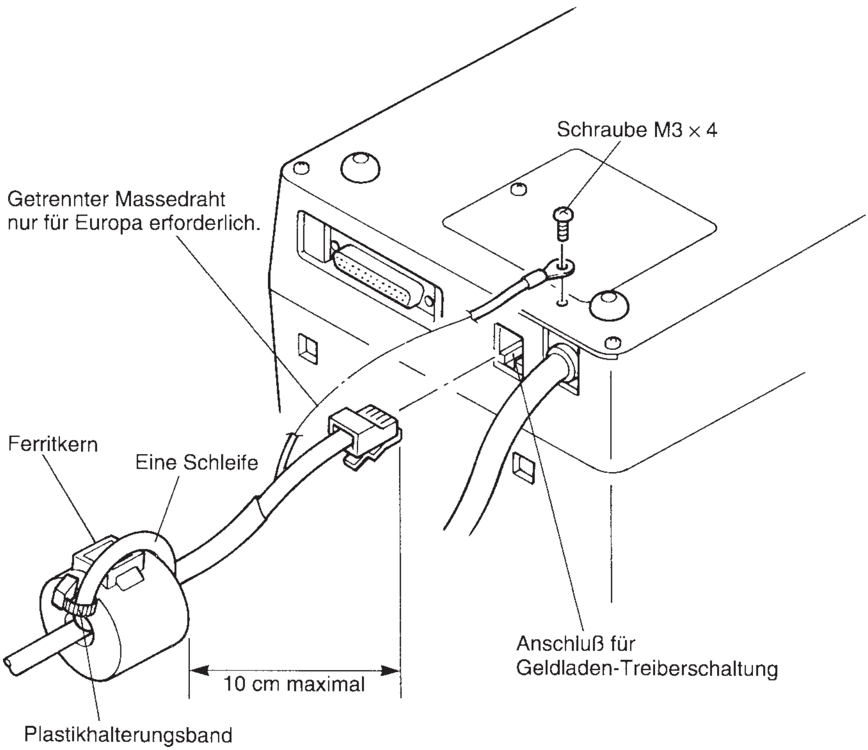


Abb. 3-5

4. ANSCHLUSS DES SCHNITTSTELLENKABELS

4-1. Serielles Schnittstellenkabel

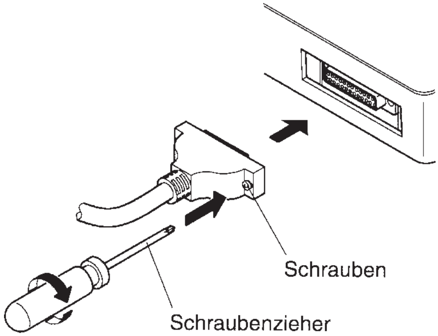


Abb. 4-1 Anschließen des seriellen Schnittstellenkabels

① Schalten Sie sowohl den Hostcomputer als auch den Drucker aus.
② Stecken Sie den Stecker des Schnittstellenkabels in die entsprechenden Buchsen am Drucker und am Hostcomputer ein.
③ Ziehen Sie die Schrauben an den Steckern fest.

DEUTSCH

4-2. Paralleles Schnittstellenkabel

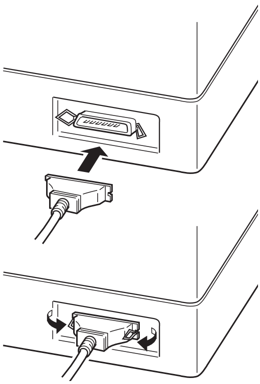


Abb. 4-2 Anschließen des parallelen Schnittstellenkabels

① Schalten Sie sowohl den Hostcomputer als auch den Drucker aus.
② Stecken Sie einen Stecker des Schnittstellenkabels in die parallele Schnittstellenbuchse am Drucker, und klemmen Sie ihn mit den Haltebügeln fest, wie in der Abbildung 4-2 gezeigt.
③ Stecken Sie den anderen Stecker des Schnittstellenkabels in die parallele Schnittstellenbuchse am Hostcomputer, und klemmen Sie ihn mit den Haltebügeln fest.

INDICE

L'Appendice appare solo nella sezione in inglese di questo manuale.

1. DISIMBALLAGGIO E INSTALLAZIONE

1-1. Disimballaggio

Dopo aver disimballato l'unità, controllare che tutti gli accessori siano inclusi nella confezione.

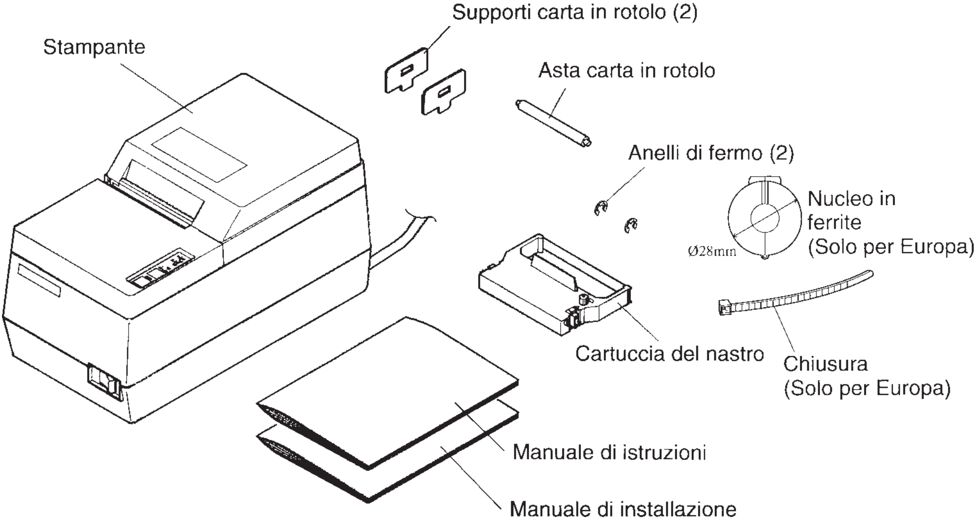


Fig. 1-1 Disimballaggio (SP312)

1-2. Note sul maneggio

1. Installare l'unità su un appoggio o un tavolo dalla superficie piana e regolare.
2. Non collegare la spina del cavo di alimentazione CA ad una presa cui sono collegati altri dispositivi che generano disturbi elettrici (come motori elettirici, ecc.).
   IMPORTANTE!
   Installare la stampante vicino ad una presa di corrente facilmente accessibile.
3. Fare attenzione a non lasciar cadere graffette, spilli o altri oggetti estranei nell'unità perché possono causare malfunzionamenti della stampante.
4. Quando si pulisce la superficie esterna dell'unità, togliere lo sporco, materiali estranei, ecc. con un panno morbido inumidito con detergente neutro.
5. Non tentare di stampare quando la carta o la cartuccia del nastro non sono inserite nella stampante perchè tale azione può danneggiare la testina di stampa.
6. Usare solo carta in rotolo che non è incollata al supporto centrale.
7. Non aprire il coperchio anteriore durante la stampa (questo viene considerato un errore meccanico e la stampante si ferma).

ITALIANO

2. IDENTIFICAZIONE DELLE PARTI E NOMENCLATURA

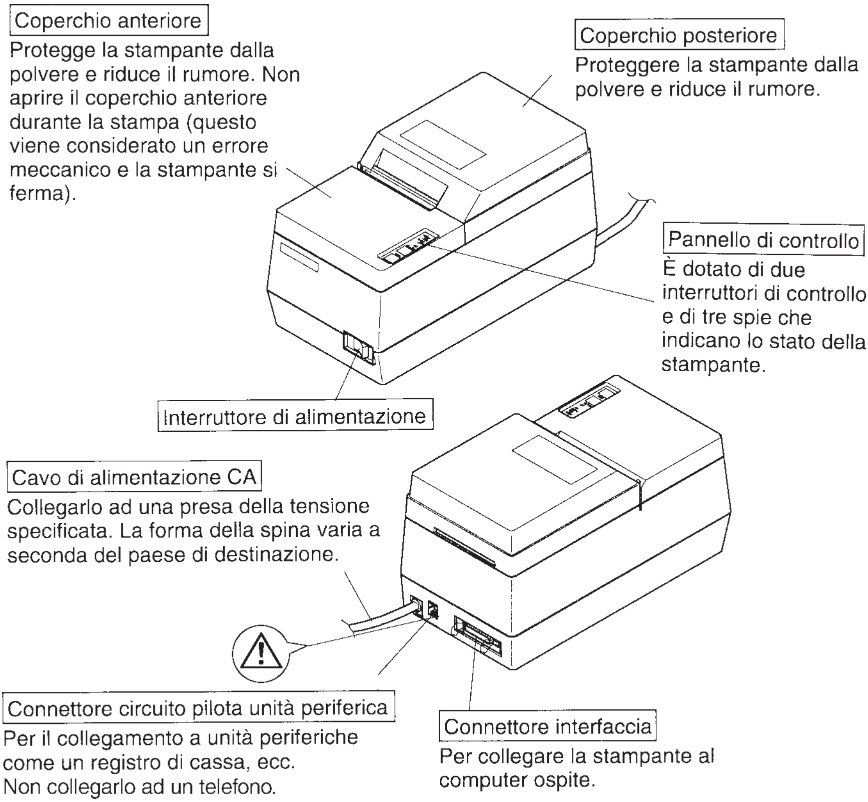


Fig. 2-1 Vista esterna della stampante (SP312)

3. INSTALLAZIONE DEL NUCLEO IN FERRITE

NOTA: Fare particolare attenzione durante l'esecuzione dei procedimenti sotto indicati.

■ Un filtro disturbi a nucleo in ferrite per il cavo pilota registro di cassa è imballato insieme alla stampante.

■ Il nucleo di ferrite ènormalmente imballato aperto, come mostrato nella Fig. 3-2. Se il nucleo in ferrite non èaperto, usare un oggetto appuntito per aprire il blocco di plastica del nucleo di ferrite, come mostrato nella Fig. 3-1. Quando si apre, fare attenzione a non danneggiare il nucleo in ferrite o il blocco di plastica.

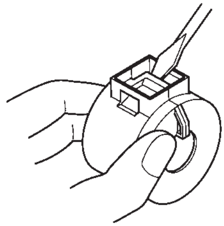


Fig. 3-1

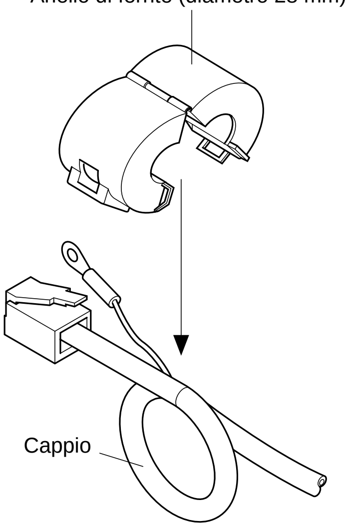
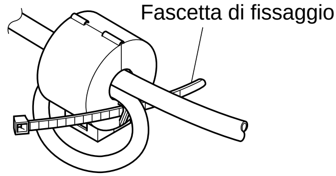
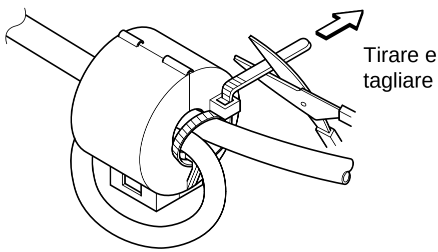


Fig. 3-2



• Far passare il fermo attraverso il nucleo in ferrite.

Fig. 3-3



• Far passare il fermo interno al cavo e bloccarlo.

Tagliare via l'eccesso con un paio di forbici.

Fig. 3-4

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■ Fissare il nucleo in ferrite al cavo pilota registro di cassa, avvolgendo il cavo come mostrato nella Fig. 3-2.

- Quando si installa il nucleo in ferrite, fare attenzione a non danneggiare il cavo.
- Il nucleo in ferrite deve essere ancorato saldamente in posizione con il fermo in dotazione, come mostrato nella Fig. 3-3 e Fig. 3-4.
- Non dimenticare di avvolgere il cavo.

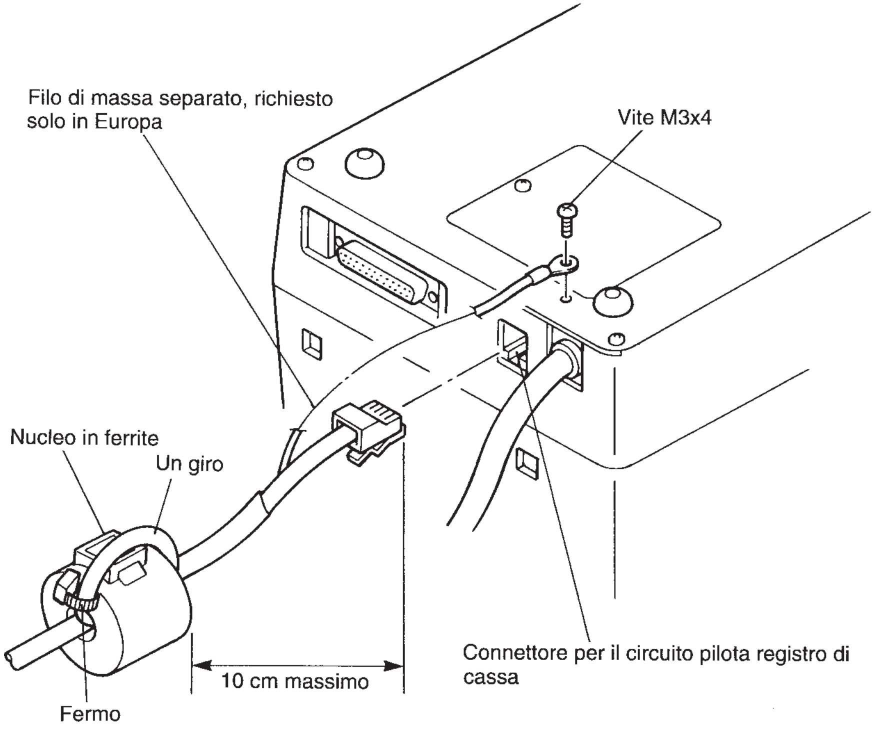


Fig. 3-5

ITALIANO

4. COLLEGAMENTO DEL CAVO INTERFACCIA

4-1. Cavo interfaccia seriale

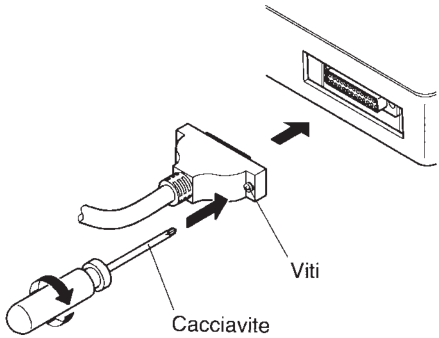


Fig. 4-1 Collegamento del cavo interfaccia seriale

① Spegnere sia il computer ospite che la stampante.
② Inserire il connettore del cavo interfaccia nel connettore sulla stampante e l'altro capo del cavo interfaccia nel connettore sul computer.
③ Serrare le viti dei connettori.

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4-2. Cavo interfaccia parallelo

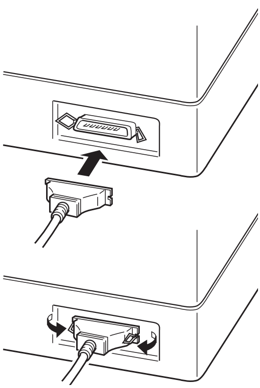
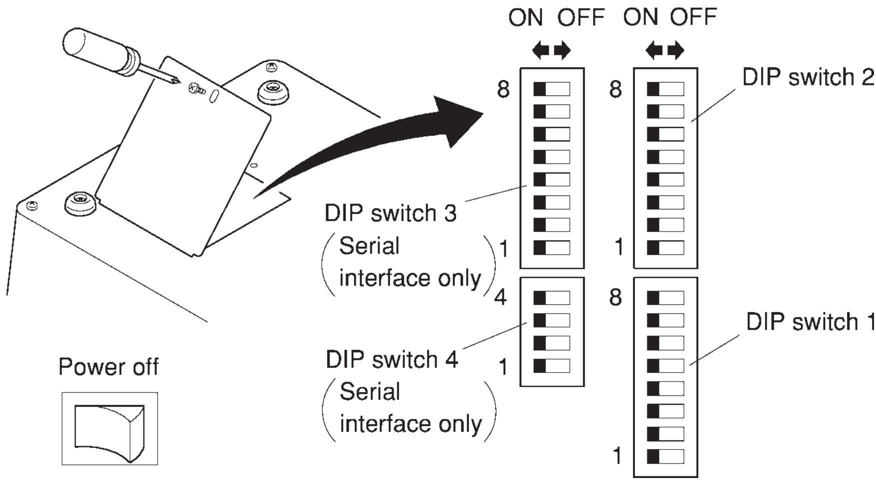


Fig. 4-2 Collegamento del cavo interfaccia parallelo

① Spegnere sia il computer ospite che la stampante.
② Inserire un connettore del cavo interfaccia nel connettore sulla stampante e fissarlo con la morsa, come mostrato nella Fig. 4-2.
③ Inserire l'altro terminale del cavo interfaccia nel connettore sul computer e fissarlo con la morsa.

DIP Switch Setting

Each of the switches in the DIP switch array is factory preset to the “ON” position. Be sure to turn the power for both the printer and host computer off before changing the setting of the DIP switches.



DIP switch array

■ DIP-SW 1

Switch	Function		ON	OFF
1-1	(Not used)			
1-2				
1-3	Control code CR		Invalid	Valid
1-4 *1	When turning the power on.	DC1, DC 3 mode	Select	Deselect
		Addressable mode *2	Deselect	Select
1-5	Setting the paper feed length		1/6-inch	1/8-inch
1-6	Setting the buffer size		4 K-bytes	256 bytes
1-7	Backed up RAM		YES	NO
1-8	Paper out detection function		Valid	Invalid

*1 If you use a parallel interface printer, Switch 1-4 is used for switching the auto cutting control mode. For details, see Switch 3-4 described on the following page. (SP342)

*2 The addressable mode is valid only when the optional RS-422A serial interface is mounted.

■ DIP-SW 2

Switch	Function	ON	OFF
2-1	Character code table	See table below.	
2-2			
2-3	(Not used)		
2-4	Setting the paper width	3.25-inch, 3.0-inch	2.25-inch
2-5	(Not used)		
2-6	International character set	See table below.	
2-7			
2-8			

□ Character code table (switches 2-1, 2-2)

Switch	U.S.A. & Europe	IBM #1	IBM #2	Japan
2-1	ON	OFF	ON	OFF
2-2	ON	ON	OFF	OFF

□ International character set (Switches 2-6, 2-7 and 2-8)

Switch	U.S.A.	France	Germany	England	Denmark	Sweden	Italy	Spain
2-6	ON	OFF	ON	OFF	ON	OFF	ON	OFF
2-7	ON	ON	OFF	OFF	ON	ON	OFF	OFF
2-8	ON	ON	ON	ON	OFF	OFF	OFF	OFF

■ DIP-SW 3 (For serial interface type only)

Switch	Function	ON	OFF
3-1	Data transmission rate	See next page	
3-2			
3-3			
3-4	Auto cutting control mode *3 (SP342)	Invalid	Valid
3-5	Data composition	DTR mode	X-ON/X-OFF mode
3-6	Data word length	8-data bit	7-data bit
3-7	Vertical parity check	No parity check	Parity check
3-8	Parity	Odd parity	Even parity

*3 When a command is given to continuously feed paper over 7/6 inches in the auto cutting control mode, the paper will be fully cut.

□ Data transmission rate (baud rate)

Baud rate	3-1	3-2	3-3
150 bps	OFF	OFF	OFF
300 bps	OFF	OFF	ON
600 bps	OFF	ON	OFF
1200 bps	OFF	ON	ON
2400 bps	ON	OFF	OFF
4800 bps	ON	OFF	ON
9600 bps	ON	ON	ON/OFF

■ DIP SW 4 (For serial interface type only)

Function / Switch	DC1, DC3 invalid mode	Addressable mode *4														DC1, DC3 valid mode
		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	
4-1	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
4-2	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
4-3	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
4-4	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

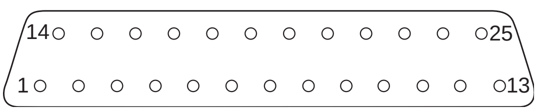
*4 The addressable mode is valid only when an optional RS-422A serial interface is mounted.

APPENDIX

Connectors and Signals (Serial Interface)

RS-232C

Pin no.	Signal name	I/O direction	Function
1	F-GND	—	Frame ground
2	TXD	OUT	Transmitted data
3	RXD	IN	Received data
4	RTS	OUT	Data transmission request signal. This is always “SPACE” when the printer is turned on.
5	CTS	IN	This signal changes to “SPACE” when host computer is ready to transmit data. (In this instance, the printer does not check this signal.)
6	N/C		Not connected
7	S-GND	—	Signal ground
8	N/C		Not connected
9-10	N/C		This pin is used when using the optional interface board.
11	RCH	OUT	This signal changes to “SPACE” when the printer is ready to receive data. (The signal line is same as pin 20.)
12	N/C		Not connected.
13	S-GND	—	Signal ground
14	FAULT	OUT	When a printer error occurs (such as paper out, mechanical error, etc.), this signal is set to “MARK”.
15	Multi-printer TXD	OUT	Diode coupled TXD
16	Multi-printer DTR	OUT	Diode coupled DTR
17 to 19	N/C		This pin is used when using the optional interface board.
20	DTR	OUT	Data terminal ready signal. When the printer is ready to receive data, this signal changes to “SPACE”.
21-22	N/C		Not connected
23 to 25	N/C		This pin is used when using the optional interface board.



Serial interface connector

APPENDIX

20 mA current loop (option)

Pin no.	Signal name	I/O direction	Function
9	TTY TXDR	—	Indicates the ground side of the data signal of 20 mA loop current.
10	TTY TXD	OUT	Transmitted data of 20 mA current loop.
17	TTY TXDR	—	Indicates the ground side of the data signal of 20 mA loop current.
18	TTY RXDR	—	Indicates the ground side of the data signal of 20 mA loop current.
19	TTY RXD	IN	Received data of 20 mA current loop.
23	TTY RXDR	—	Indicates the ground side of the data signal at 20mA loop current.
24	TTY TXD	OUT	Transmission data of 20 mA current loop.
25	TTY RXD	IN	Reception data of 20 mA current loop.

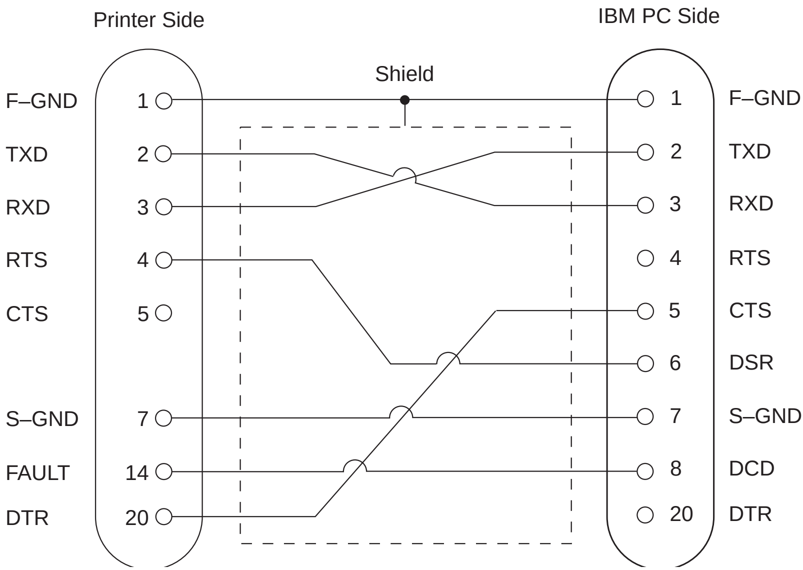
RS-422A (option)

Pin no.	Signal name	I/O direction	Function
9	SD (+)	OUT	Transmitted data
10	SD (–)	OUT	Transmitted data
17	RD (+)	IN	Received data
18	RD (–)	IN	Received data
19	CS (+)	IN	When the host computer is set to standby for data transmission, this signal changes to “SPACE”. (In this instance, the printer does not check the signal.)
23	CS (–)	IN	When the host computer is set to standby for data transmission, this signal changes to “SPACE”. (In this instance, the printer does not check the signal.)
24	RS (+)	OUT	Data transmission request signal. When the printer is ready to receive data, this signal changes to “SPACE”.
25	RS (–)	OUT	Data transmission request signal. When the printer is ready to receive data, this signal changes to “SPACE”.

APPENDIX

Interface Connections (Serial Inteface)

The following is a basic example of interface connections. (For interface connections, refer to the specifications for the respective interface.) An IBM PC type serial port is shown in below.

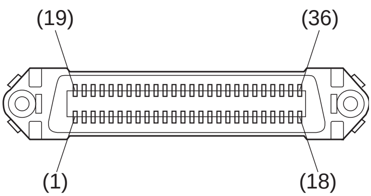


Example of interface connections for an IBM PC

APPENDIX

Connectors and Signals (Parallel Interface)

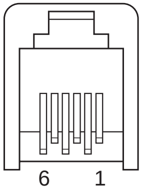
Pin No.	Signal Name	IN/OUT	Function
1	$\overline{\text{STROBE}}$	IN	Signals when data is ready to be read. Signal goes from HIGH to LOW (for at least 0.5 microsec.) when the data is available.
2-9	DATA1-8	IN	These signals provide the information of the first to eighth bits of parallel data. Each signal is at HIGH level for a logical 1 and at a LOW level for a logical 0.
10	$\overline{\text{ACK}}$	OUT	A 9 microsecond LOW pulse acknowledges receipt of the data.
11	BUSY	OUT	When this signal goes to LOW, the printer is ready to accept data. When the printer is in one of the conditions below, “HIGH” is set. 1. Data is being entered. 2. Off line. 3. Error condition.
12	PAPER OUT	OUT	This signal is normally LOW. It will go to HIGH if the printer runs out of paper.
13	SELECTED	OUT	This signal is HIGH when the printer is online.
14-15	N/C		Unused
16	SIGNAL GND		Signal ground.
17	CHASSIS GND		Chassis ground, isolated from logic ground.
18	+5VDC		+5VDC (Max 50 mA)
19-30	GND		Twisted pair return the signal to ground level.
31	$\overline{\text{RESET}}$	IN	When this signal goes to LOW, the printer is reset to its power-on condition.
32	$\overline{\text{ERROR}}$	OUT	This signal is normally HIGH. This signal goes to LOW to signal that the printer cannot print due to an error condition. Refer to Item 8-4 Emergency Suspension.
33	EXT GND		External ground.
34	COMPULSION	OUT	Compulsion signal
35-36	N/C		Unused.



This connector mates with an Amphenol 57-30360 connector

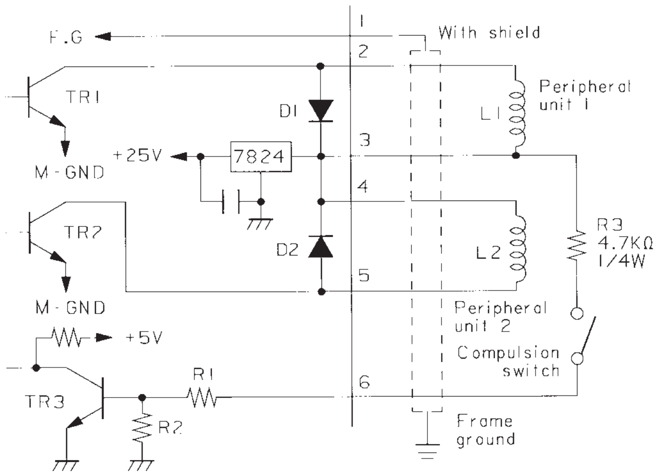
Parallel interface connector (printer side)

Peripheral Unit Drive Circuit



6-P modular jack
connecter

[Drive output 24V, max. 1.0 A]



Drive circuit

AC power cable: Approx. 155 cm long

ELECTRONIC PRODUCTS DIVISION
STAR MICRONICS CO., LTD.
536 Nanatsushinya, Shimizu, Shizuoka,
424-0066 Japan
Tel: 0543-47-0112, Fax: 0543-48-5013

Please access the following URL
http://www.star-micronics.co.jp/service/
frame_sp_spr_e.htm
for the lastest revision of the manual.

OVERSEAS SUBSIDIARY COMPANIES
STAR MICRONICS AMERICA, INC.
1150 King Georges Post Road, Edison, NJ 08837-3729 U.S.A.
Tel: 732-623-5555, Fax: 732-623-5590
http://www.starmicronics.com

STAR MICRONICS U.K. LTD.
Star House, Peregrine Business Park, Gomm Road,
High Wycombe, Bucks, HP13 7DL, U.K.
Tel: 01494-471111, Fax: 01494-473333
http://www.starmicronics.co.uk

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